

I Claim:

1. A retaining system for securing a cutting tool to a support block, said retaining system comprising:

(a) at least one groove, having a first predetermined
5 shape, formed in an outer surface of a shank portion of said cutting tool intermediate each end thereof, said groove being formed in a direction transverse to a longitudinal axis of said shank;

(b) at least one groove, having a second predetermined
10 shape, formed in a surface of a bore formed through an axis of said support block for receiving therein said shank portion of said cutting tool, said at least one groove formed in said outer surface of said shank portion of said cutting tool being substantially radially opposed to said at least one groove
15 formed in said surface of said bore formed through said axis of said support block when said shank portion is inserted into said bore of said support block; and

(c) at least one pin member engageable with each of said at least one groove formed in said outer surface of said shank
20 portion of said cutting tool and said at least one groove formed in said surface of said bore formed through said axis of said support block for securing said cutting tool to said support block.

2. A retaining system for securing a cutting tool to a support block, according to claim 1, wherein said shank portion further includes a circumferential groove formed in said outer surface thereof closely adjacent an end of said shank portion
5 for receiving a washer like member therein to provide additional retention of said cutting tool in such support block.

3. A retaining system for securing a cutting tool to a support block, according to claim 1, wherein said shank portion
10 includes at least two grooves formed in said outer surface thereof, said at least two grooves being formed in a direction transverse to a longitudinal axis of said shank portion.

4. A retaining system for securing a cutting tool to a
15 support block, according to claim 3, wherein said at least two grooves are formed substantially radially opposed with each other.

5. A retaining system for securing a cutting tool to a
20 support block, according to claim 4, wherein said predetermined shape of each of said at least two grooves formed substantially radially opposed with each other is oblong.

6. A retaining system for securing a cutting tool to a support block, according to claim 1, wherein said at least one groove formed in said shank portion is formed as a circumferential groove thereby enabling rotation of said cutting
5 tool in said support block.

7. A retaining system for securing a cutting tool to a support block, according to claim 6, wherein said circumferential groove formed in said outer surface of said
10 shank portion has a substantially oblong shape.

8. A retaining system for securing a cutting tool to a support block, according to claim 1, wherein said at least one groove formed in said surface of said bore formed through said
15 axis of said support block is formed as part of at least one aperture through said support block adjacent said bore formed through said axis of said support block.

9. A retaining system for securing a cutting tool to a
20 support block, according to claim 8, wherein said at least one groove formed in said surface of said bore has a substantially round shape.

10. A retaining system for securing a cutting tool to a support block, according to claim 9, wherein said at least one aperture has a substantially round shape.

5 11. A retaining system for securing a cutting tool to a support block, according to claim 1, wherein said at least one pin member has a substantially round shape.

10 12. A retaining system for securing a cutting tool to a support block, according to claim 11, wherein a diameter of said at least one aperture formed in said support block has a substantially identical diameter as said at least one pin member.

15 13. A retaining system for securing a cutting tool to a support block, according to claim 12, wherein said at least one pin member is formed from at least one of metal, plastic, ceramic and various combinations thereof.

20 14. A retaining system for securing a cutting tool to a support block, according to claim 12, wherein said at least one pin member is formed of metal.

15. A retaining system for securing a cutting tool to a support block, according to claim 14, wherein said at least one pin member is formed from rolled spring steel.

5 16. A retaining system for securing a cutting tool to a support block, according to claim 1, wherein said at least one pin member has a substantially identical diameter as said at least one groove formed in said surface of said bore formed through said axis of said support block.

10 17. A retaining system for securing a cutting tool to a support block, according to claim 16, wherein said at least one pin member is formed from rolled spring steel.

15 18. A retaining system for securing a cutting tool to a support block, according to claim 1, wherein said retaining system further includes at least one ledge portion formed on an outer surface of said shank portion.

20 19. A retaining system for securing a cutting tool to a support block, according to claim 1, wherein said retaining system further includes a pair of ledge portions formed on an outer surface of said shank portion.

20. A retaining system for securing a cutting tool to a support block, according to claim 1, wherein at least one of said pair of ledge portions formed on said outer surface of said shank portion is disposed substantially transverse to a longitudinal axis of said shank portion.